

Area	North latitude	West longitude	(MHz)	Excluded channels		
				200 kHz	128 kHz	52 kHz
Boston, MA	42° 21' 24.4"	71° 03' 23.2"	470-476	14		
			476-482		15	
			482-488	16		
			488-494		17	
Chicago, IL	41° 52' 28.1"	87° 38' 22.2"	470-476	14		
			476-482	15		
			482-488		16	
Cleveland, OH ¹	41° 29' 51.2"	81° 41' 49.5"	470-476	14		
			476-482		15	
			482-488	16		
			488-494		17	
Dallas/Fort Worth, TX	32° 47' 09.5"	96° 47' 38.0"	476-482		15	
			482-488	16		
			488-494		17	
Detroit, MI ¹	42° 19' 48.1"	83° 02' 56.7"	470-476		4	
			476-482	15		
			482-488		6	
			488-494	17		
Gulf of Mexico			476-494			15, 16, 17
Hawaii			488-494			17
Houston, TX	29° 45' 26.8"	95° 21' 37.8"	482-488		6	
			488-494	17		
			494-500		8	
Los Angeles, CA	34° 03' 15.0"	118° 14' 31.3"	470-476	14		
			476-482		5	
			482-488	16		
			488-494		7	
			500-506		9	
			506-512	20		
			512-518		1	
Miami, FL	25° 46' 38.4"	80° 11' 31.2"	470-476	4		
			476-482		5	
New York/N.E. New Jersey	40° 45' 06.4"	73° 59' 37.5"	470-476	4		
			476-482	5		
			482-488	6		
			488-494		7	
Philadelphia, PA	39° 56' 58.4"	75° 09' 19.6"	494-500		3	
			500-506	9		
			506-512	0		
			512-518		11	
Pittsburgh, PA	40° 26' 19.2"	79° 59' 59.2"	470-476	4		
			476-482		5	
			488-494		7	

Area	North latitude	West longitude	Excluded frequencies (MHz)	Excluded channels		
				200 km	128 km	52 km
San Francisco/Oakland, CA	37° 46' 38.7"	122° 24' 43.9"	494-500	18		
			500-506		19	
			476-482		15	
			482-488	16		
			488-494	17		
Washington D.C./MD/VA...	38° 53' 51.4"	77° 00' 31.9"	494-500		18	
			482-488		16	
			488-494	17		
			494-500	18		
			500-506		19	

¹ The distance separation requirements are not applicable in these cities until further order from the Commission.

(d) Wireless video assist devices are limited to a maximum of 250 milliwatts ERP and must limit power to that necessary to reliably receive a signal at a distance of 300 meters. Wireless video assist devices must comply with the emission limitations of § 74.637 of this part.

(e) The antenna of a wireless video assist device must be attached to the transmitter either permanently, or **by** means of a unique connector designed to allow replacement of authorized antennas but prevent the use of unauthorized antennas. When transmitting, the antenna must not be more than 10 meters above ground level.

(f)(1) A license for a wireless video assist device will authorize the license holder to use all frequencies available for wireless video assist devices, subject to the limitations specified in this section.

(2) Licensees may operate as many wireless video assist devices as necessary, subject to the notification procedures of this section.

(g) *Notification procedure.* Prior to the commencement of transmitting, licensees must notify the local broadcasting coordinator of their intent to transmit. If there is no local coordinator in the intended area of operation, licensees must notify all adjacent channel TV stations within 161 km (100 mi) of the proposed operating area.

(1) Notification must be made at least 10 working days prior to the date of intended transmission

(2) Notifications must include:

(A) Frequency or frequencies

(B) Location.

(C) Antenna height.

(D) Emission type(s).

- (E) Effective radiated power.
- (F) Intended dates of operation
- (G) Licensee contact information,

(3) (i) Failure of a local coordinator to respond to a notification request prior to the intended dates of operation indicated on the request will be considered as having the approval of the coordinator. In this case, licensees must in addition notify all co-channel and adjacent channel TV stations within 161 km (100 mi) of the proposed operating area. This notification is for information purposes only and will not enable TV stations to prevent a WAVD from operating, but is intended to help identify the source of interference if any is experienced after a WAVD begins operation.

(ii) If there is no local coordinator in the intended area of operation, failure of any adjacent channel TV station to respond to a notification request prior to the intended dates of operation indicated on the request will be considered as having the approval of the TV station.

(4) Licensees must operate in a manner consistent with the response of the local coordinator, or, if there is no local coordinator in the intended area of operation, the responses of the adjacent channel TV stations. Disagreements may be appealed to the Commission. However, in those instances, the licensee will bear the burden of proof and proceeding to overturn the recommendation of the local coordinator or the co-channel or adjacent channel TV station.

(h) Licenses for wireless video assist devices may not be transferred or assigned

(i) The product literature that manufacturers include with a wireless assist video device must contain information regarding the requirement for users to obtain an FCC license, the requirement that stations must locate at least 129 kilometers away from a co-channel TV station, the limited class of users that may operate these devices, the authorized uses, the need for users to obtain a license, and the requirement that a local coordinator (or adjacent channel TV stations, if there is no local coordinator) must be notified prior to operation.

57. Section 74.882 is revised to read as follows:

§ 74.882 Station identification.

(a) For transmitters used for voice transmissions and having a transmitter output power exceeding 50 mW, an announcement shall be made at the beginning and end of each period of operation at a single location. over the transmitting unit being operated, identifying the transmitting unit's call sign or designator, its location, and the call sign of the broadcasting station or name of the licensee with which it is being used. A period of operation may consist of a continuous transmission or intermittent transmissions pertaining to a single event.

(b) Each wireless video assist device, when transmitting, must transmit station identification at the beginning and end of each period of operation. identification may be made by transmitting the station call sign by visual or aural means or by automatic transmission in international Morse telegraphy.

(1) A period of operation is defined as a single uninterrupted transmission or a series of intermittent transmissions from a single location.

(2) Station identification shall be performed in a manner conducive to prompt association of the signal source with the responsible licensee. In exercising the discretion provide by this rule, licensees are expected too act in a responsible manner to assure that result.

PART 78 – CABLE TELEVISION RELAY SERVICE

58. The authority citation for Part 7X continues to read as follows:

AUTHORITY: Secs. 2, 3, 4, 301, 303, 307, 308, 309, 48 Stat., as amended, 1064,1065,1066, 1081,1082,1083,1084,1085; 47 U.S.C. 152,153,154,301,303,307,308,309.

59. Section 78.18 is amended by revising paragraph (I) to read as follows:

§ 78.18 Frequency assignments.

* * * * *

(I) The band 13.15 - 13.20 GHz is reserved for the assignment of CARS Pickup and Television Pickup stations on a primary co-equal basis within 50 kilometers of the television markets defined in § 76.53 of this chapter. The band 13.20 - 13.2125 GHz is reserved exclusively for the assignment of Television Pickup stations on a primary basis. Fixed stations licensed prior to (insert date **30** days after date of publication in the Federal Register) may continue operation under their current status on channels in the 13.15 - **13.2125** GHz band, subject to periodic license renewals.

60. Section **78.36** is revised to read as follows:

§ 78.36 Frequency coordination.

(a) Coordination of all frequency assignments for fixed stations in all bands above **2110 MHz**, and for mobile (temporary fixed) stations in the bands 6425-6525 MHz and **17.7-19.7 GHz**, will be in accordance with the procedure established in paragraph (b) of this section, except that the prior coordination process for mobile (temporary fixed) assignments may be completed orally and the period allowed for response to a coordination notification may be less than **30** days if the parties agree. Coordination of all frequency assignments for all mobile (temporary fixed) stations in all bands above 2110 MHz, except the hands 6425-6525 MHz and 17.7-19.7 GHz, will be conducted in accordance with the procedure established in paragraph (b) of this section or with the procedure in paragraph (d) of this section. Coordination of all frequency assignments for all fixed stations in the band 1990-2110 MHz will be in accordance with the procedure established in paragraph (c) of this section. Coordination of all frequency assignments for all mobile (temporary fixed) stations in the band **1990-2110 MHz** will be conducted in accordance with the procedure in paragraph (d) of this section.

(b) Frequency coordination for all fixed stations in all bands above 2110 MHz, and for all mobile (temporary fixed) stations in the bands 6425-6525 MHz and **17.7-19.7 GHz**. For each frequency authorized under this part, the interference protection criteria in § 101.105(a), (b), and (c) of this chapter and the following frequency usage coordination procedures will apply:

(1) General requirements. Proposed frequency usage must be prior coordinated with existing licensees, permittees, and applicants in the area, and other applicants with previously filed applications, whose facilities could affect or be affected by the new proposal in terms of frequency interference on active channels, applied-for channels, or channels coordinated for future growth. Coordination must be completed prior to filing an application for regular authorization, or a major amendment to a pending application, or any major modification to a license. In coordinating frequency usage with stations in the

fixed satellite service, applicants for stations in the bands 6425-6525 MHz and 17.7-19.7 GHz must also comply with the requirements of § 101.21(f). In engineering a system or modification thereto, the applicant must, by appropriate studies and analyses, select sites, transmitters, antennas and frequencies that will avoid interference in excess of permissible levels to other users. All applicants and licensees must cooperate fully and make reasonable efforts to resolve technical problems and conflicts that may inhibit the most effective and efficient use of the radio spectrum; however, the party being coordinated with is not obligated to suggest changes or re-engineer a proposal in cases involving conflicts. Applicants should make every reasonable effort to avoid blocking the growth of systems as prior Coordinated. The applicant must identify in the application all entities with which the technical proposal was coordinated. In the event that technical problems are not resolved, an explanation must be submitted with the application. Where technical problems are resolved by an agreement or operating arrangement between the parties that would require special procedures be taken to reduce the likelihood of interference in excess of permissible levels (such as the use of artificial site shielding) or would result in a reduction of quality or capacity of either system, the details thereof may be contained in the application.

(2) Coordination procedure guidelines are as follows:

(i) Coordination involves two separate elements: notification and response. Both or either may be oral or in written form. To be acceptable for filing, all applications and major technical amendments must certify that coordination, including response, has been completed. The names of the licensees, permittees and applicants with which coordination was accomplished must be specified. If such notice and/or response is oral, the party providing such notice or response must supply written documentation of the communication upon request:

(ii) Notification must include relevant technical details of the proposal. At minimum, this should include, as applicable, the following:

Applicant's name and address.

Transmitting station name.

Transmitting station coordinates.

Frequencies and polarizations to be added, changed or deleted.

Transmitting equipment type, its stability, actual output power, emission designator, and type of modulation (loading).

Transmitting antenna type(s), model, gain and, if required, a radiation pattern provided or certified by the manufacturer.

Transmitting antenna center line height(s) above ground level and ground elevation above mean sea level.

Receiving station name.

Receiving station coordinates.

Receiving antenna type(s), model, gain, and, if required, a radiation pattern provided or certified by the manufacturer.

Receiving antenna center line height(s) above ground level and ground elevation above mean sea level.

Path azimuth and distance.

Estimated transmitter transmission line loss expressed in dB.

Estimated receiver transmission line loss expressed in dB.

For a system utilizing ATPC, maximum transmit power, coordinated transmit power, and nominal transmit power.

Note: The position location of antenna sites shall be determined to an accuracy of no less than ± 1 second in the horizontal dimensions (latitude and longitude) and ± 1 meter in the vertical dimension (ground elevation) with respect to the National Spatial Reference System.

(iii) For transmitters employing digital modulation techniques, the notification should clearly identify the type of modulation. Upon request, additional details of the operating characteristics of the equipment must also be furnished;

(iv) Response to notification should be made as quickly as possible, even if no technical problems are anticipated. Any response to notification indicating potential interference must specify the technical details and must be provided to the applicant, in writing, within the 30-day notification period. Every reasonable effort should be made by all applicants, permittees and licensees to eliminate all problems and conflicts. If no response to notification is received within 30 days, the applicant will be deemed to have made reasonable efforts to coordinate and may file its application without a response;

(v) The 30-day notification period is calculated from the date of receipt by the applicant, permittee, or licensee being notified. If notification is by mail, this date may be ascertained by:

(A) The return receipt on certified mail;

(B) The enclosure of a card to be dated and returned by the recipient; or

(C) A conservative estimate of the time required for the mail to reach its destination. In the last case, the estimated date when the 30-day period would expire should be stated in the notification.

(vi) An expedited prior coordination period (less than 30 days) may be requested when deemed necessary by a notifying party. The coordination notice should be identified as "expedited" and the requested response date should be clearly indicated. However, circumstances preventing a timely response from the receiving party should be accommodated accordingly. It is the responsibility of the notifying party to receive written concurrence (or verbal: with written to follow) from affected parties or their coordination representatives.

(vii) All technical problems that come to light during coordination must be resolved unless a statement is included with the application to the effect that the applicant is unable or unwilling to resolve the conflict and briefly the reason therefore;

(viii) Where a number of technical changes become necessary for a system during the course of coordination, an attempt should be made to minimize the number of separate notifications for these changes. Where the changes are incorporated into a completely revised notice, the items that were changed from the previous notice should be identified. When changes are not numerous or complex, the party receiving the changed notification should make an effort to respond in less than 30 days. When the notifying party believes a shorter response time is reasonable and appropriate, it may be helpful for that party to so indicate in the notice and perhaps suggest a response date;

(ix) If, after coordination is successfully completed, it is determined that a subsequent change could have no impact on some parties receiving the original notification, these parties must be notified of the change and of the coordinator's opinion that no response is required:

(x) Applicants, permittees and licensees should supply to all other applicants, permittees and licensees within their areas of operations, the name, address and telephone number of their coordination representatives. Upon request from coordinating applicants, permittees and licensees, data and information concerning existing or proposed facilities and future growth plans in the area of interest

should be furnished unless such request is unreasonable or would impose a significant burden in compilation;

(xi) Parties should keep other parties with whom they are coordinating advised of changes in plans for facilities previously coordinated. If applications have not been tiled 6 months after coordination was initiated, parties may assume that such frequency use is no longer desired unless a second notification has been received within 10 days of the end of the 6 month period. Renewal notifications are to be sent to all originally notified parties, even if coordination has not been successfully completed with those parties; and

(xii) Any frequency reserved by a licensee for future use in the bands subject to this part **must** be released for use by another licensee, permittee, or applicant upon a showing by the latter that it requires an additional frequency and cannot coordinate one that is not reserved for future use.

(c) Frequency coordination for all fixed stations in the band 1990-2110 MHz. For each frequency authorized under this part, the following frequency usage coordination procedures will apply:

(1) General requirements. Applicants are responsible for selecting the frequency assignments that are least likely to result in mutual interference with other licensees in the same area. Applicants may consult local frequency coordination committees, where they exist, for information on frequencies available in the area. Proposed frequency usage must be coordinated with existing licensees and applicants in the area whose facilities could affect or be affected **by** the new proposal in terms of frequency interference on active channels, applied-for channels, or channels coordinated for future growth. Coordination must be completed prior to filing an application for regular authorization, for major amendment to a pending application, or for major modification to a license.

(2) To be acceptable for tiling, all applications for regular authorization, or major amendment to a pending application, or major modification to a license, must include a certification attesting that all co-channel and adjacent-channel licensees and applicants potentially affected **by** the proposed fixed use of the frequency(ies) have been notified and are in agreement that the proposed facilities can be installed without causing harmful interference to those other licensees and applicants.

(d) Frequency coordination for all mobile (temporary fixed) stations in all bands above 1990 MHz, except the bands 6425-6525 MHz and 17.7-19.7 GHz. For each frequency authorized under this part, applicants are responsible for selecting the frequency assignments that are least likely to result in mutual interference with other licensees in the same area. Applicants may consult local frequency coordination committees, where they exist, for information on frequencies available in the area. In selecting frequencies, consideration should be given to the relative location of receive points, normal transmission paths, and the nature of the contemplated operation.

61. Section 78.101 is amended by revising the entry for 2,025-2,110 MHz in the table in paragraph (a) and adding a new paragraph (c) to read as follows:

§ 78.101 Power limitations.

(a) * * *

Frequency band (MHz)	Maximum allowable transmitter power	Maximum allowable EIRP ²	
	Mobile (W)	Fixed (dBW)	Mobile (dBW)
2,025 to 2,110	20.0	.....	+35
6,425 to 6,525	20.0	.....	+35
6,875 to 7,125	20.0	.....	+35
12,700 to 13,250	1.5	+55	+45
17,700 to 18,600 ....	.....	+55	.....
18,600 to 18,800 ¹ ..	.....	+35	.....
18,800 to 19,700 ....	.....	+55	.....

¹ The power delivered to the antenna is limited to -3 dBW.

² Stations licensed based on an application filed before (insert date **30** days after publication in the Federal Register), for EIRP values exceeding those specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal.

* * * * *

(c) The EIRP of transmitters that use Automatic Transmitter Power Control (ATPC) shall not exceed the EIRP specified on the station authorization. The EIRP of non-ATPC transmitters shall be maintained as near as practicable to the EIRP specified on the station authorization.

62. Section 78.103 is amended by removing the entry for 31,000 to 31,300 from the table in paragraph (e).

63. Section 78.105 is amended by revising the introductory sentence for paragraph (a): removing the entries for 31,000 to 31,300 and 38,600 to 40,000, and Footnotes 2 and 3 from the table in paragraph (a)(1); deleting paragraph (a)(4) and redesignating paragraph (a)(5) as paragraph (a)(4) to read as follows:

§ 78.105 Antenna systems.

(a) For fixed stations operating in the 12.7-13.2 GHz and 17.7-19.7 GHz bands, the following standards apply:

* * * * *

64. Section 78.106 is revised to read as follows:

§ 78.106 Interference to geostationary-satellites.

Applicants and licensees must comply with § 101.145 of this chapter to minimize the potential of interference to geostationary-satellites.

65. Section 78.108 is amended by revising paragraph (b) to read as follows:

§ 78.108 Minimum path lengths for fixed links.

* * * * *

(b) For paths shorter than those specified in the Table, the EIRP shall not exceed the value derived from the following equation.

$$\text{EIRP} = \text{MAXEIRP} - 40 \log(A/B) \text{ dBW}$$

Where:

EIRP = The new maximum EIRP (equivalent isotropically radiated power) in dBW.

MAXEIRP = Maximum EIRP as set forth in the Table in § 74.636 of this part.

A = Minimum path length from the Table above for the frequency band in kilometers.

B = The actual path length in kilometers.

NOTC TO PARAGRAPH (b): For transmitters using Automatic Transmitter Power Control, EIRP corresponds to the maximum transmitter power available, not the coordinated transmit power or the nominal transmit power.

* * * * *

66. Section 78.111 is amended by removing the entry for 31,000 to 31,300 from the table.

PART 101 - FIXED MICROWAVE SERVICES

67. The authority citation for Part 101 continues to read as follows:

AUTHORITY: 47 U.S.C. 154.303.

68. Section 101.113 is amended by revising the column headings and the entry for the 12,700-13,250 MHz frequency band in the table in paragraph (a) to read as follows:

§ 101.113 Transmitter power limitations.

(a) * * *

Frequency band (MHz)	Maximum allowable EIRP ^{1,2}	
	Fixed (dBW)	Mobile (dBW)
* * * * *	* * * * *	* * * * *
12,700-13,200 ¹	+50	
13,200-13,250 ⁴	+55	
* * * * *	* * * * *	* * * * *

¹ Per polarization.

² For multiples address operations, see § 101.147. Remote alarm units that are part of a multiple address central station protection system are authorized a maximum of 2 watts.

* * * * *

³ Also see § 101.145

* * * * *

69. Section 101.145 is amended by revising the introductory text to the paragraph, the first sentence in paragraph (h), and the first sentence in paragraph (c) to read as follows:

§ 181.145 Interference to geostationary-satellites.

These limitations are necessary to minimize the probability of harmful interference to reception in the bands 2655-2690 MHz, 5925-7075 MHz, and 12.7-13.25 GHz on board geostationary-space stations in the fixed-satellite service.

* * * * *

(b) 2655 to 2690 MHz and 5925 to 7075 MHz. * * *

(c) 12.7 to 13.25 GHz. * * *

* * * * *

70. Section 101.803 is amended by revising the first sentence in paragraph (b) to read as follows:

§ 101.803 Frequencies.

* * * * *

(b) Communications common carriers in the Local Television Transmission Service may be assigned frequencies listed in §§ 74.602(a), 78.18(a)(6), and 78.18(a)(7) of this chapter to provide service to television broadcast stations, television broadcast network-entities, cable system operators, and cable network-entities. * * *

* * * * *

71. Section 101.807 is amended by adding a second sentence to read as follows:

§ 101.807 Transmitter Power.

* * * As an exception, operations on frequencies listed in §§ 74.602(a), 78.18(a)(6), and 78.18(a)(7) of this chapter are subject to the power limitations of §§ 74.636 and 78.101(a).

APPENDIX B: Final Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act of 1980, as amended (**RFA**),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rule Making, Revisions to Broadcast Auxiliary Service Rules in Part 74 and Conforming Technical Rules for Broadcast Auxiliary Service, Cable Television Relay Service and Fixed Services in Parts 74, 78 and 101 of the Commission's Rules.*² The Commission sought written public comment on the proposals in the *Notice*, including comment on the **IRFA**. The comments received are discussed below. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

(A) *Need for and Objective of the Report and Order.*

The Report and Order updates the Broadcast Auxiliary Service (BAS) rules in Part 74 and will permit increased compatibility between Broadcast Auxiliary Services, the Cable Television Relay Service (CARS), and Fixed Service Microwave (FS) systems operating on shared spectrum. Specifically, we permit TV and aural BAS stations to use any available digital modulation technique in all BAS frequency bands so that BAS stations can take advantage of the latest developments in technology and make smooth the transition to digital TV and digital radio: update BAS emission masks to facilitate the introduction of digital equipment and to provide consistency with emission masks used in Part 101 of the rules; modify the equation used by BAS and CARS services for determining the maximum effective isotropic radiated power (EIRP) for short path lengths (this change eliminates the steep reduction in EIRP for BAS and CARS path lengths shorter than the minimum); allow BAS and CARS stations to use automatic transmit power control (ATPC) in order to facilitate more efficient spectrum use; update transmitter power rules for BAS and CARS services to provide EIRP limits for all frequency bands; require TV BAS and CARS services to prior coordinate their frequency use when using shared frequency bands to minimize the potential for harmful interference occurring when a new station begins transmitting. We also permit "wireless assist video devices" to operate on certain VHF and UHF TV spectrum, thereby increasing spectrum efficiency and promoting equipment, which will increase safety at production sites as well as lower film and television production costs. In addition, we update many other **BAS** rules and make minor rule changes to clarify or fix typographical errors in the existing rules.

(B) *Summary of Significant Issues Raised by Public Comments in Response to the IRFA,*

In the *Notice*, the Commission performed an **IRFA** and asked for comments that specifically addressed issues raised in the IRFA. No parties filed comments directly in response to the IRFA. However, commenters made recommendations regarding channel splitting, and the Commission, in response, is overlaying narrowband channels in various bands and is authorizing an effective date for channel splitting in the 950 MHz aural BAS band.

(C) *Description and Estimate of the Number of Entities Affected to Which Rules will Apply.*

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of

² See *Notice of Proposed Rule Making*, ET Docket No. 01-75, 16 FCC Rcd 10556, 10601 (2001).

¹ See 5 U.S.C. § 604.

small entities that may be affected by the action taken.⁴ The **RFA** generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁵ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁶ A small business concern is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁷ A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”⁸ Nationwide, as of 1992, there were approximately 275,801 small organizations.⁹ Finally, “small governmental jurisdiction” generally means “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000.”¹⁰ As of 1992, there were approximately 85,006 such jurisdictions in the United States.” This number includes 38,978 counties, cities, and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000.” The United States Bureau of the Census (Census Bureau) estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (96 percent) are small entities

The rules adopted in this *R&O* affect licensees of BAS (Remote Pickup, aural, and television), CARS, and fixed microwave services. Additionally, they affect manufacturers of equipment that supports the BAS.

Broadcast Auxiliary Service (BAS) involves a variety of transmitters, generally used to relay broadcast programming to the public (through translator and booster stations) or within the program distribution chain (from a remote news gathering unit back to the stations). The Commission has not developed a definition of small entities specific to broadcast auxiliary licensees. The U.S. Small Business Administration (SBA) has developed small business size standards, as follows: 1) For TV BAS, we will use the size standard for Television Broadcasting, which consists of all such companies having annual receipts of no more than \$12.0 million;” 2) For Aural BAS, we will use the size standard for Radio

⁴ 5 U.S.C. § 603(b)(3).

⁵ *Id.*, § 601(6).

⁶ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in 15 U.S.C. § 632). Pursuant to the **RFA**, the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” 5 U.S.C. § 601(3).

⁷ Small Business Act, 15 U.S.C. § 632

⁸ 5 U.S.C. § 601(4)

⁹ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

¹⁰ 5 U.S.C. § 601(5)

¹¹ U.S. Dept. of Commerce, Bureau of the Census. “1992 Census of Governments.”

¹² *Id.*

¹³ 13 C.F.R. § 121.201, NAICS code 513120

Stations, which consists of all such companies having annual receipts of no more than \$6 million;" 3) For Remote Pickup BAS we will use the small business size standard for Television Broadcasting when used by a TV station and that for Radio Stations when used by such a station.

According to Census Bureau data for 1997, there were 906 Television Broadcasting firms, total that operated for the entire year." Of this total, 734 firms had annual receipts of \$9,999,999.00 or less and an additional 71 had receipts of \$10 million to \$24,999,999.00.¹⁶ Thus, under this standard, the majority of firms can be considered small.

According to Census Bureau data for 1997, there were 4,476 Radio Stations (firms), total, that operated for the entire year." Of this total 4,265 had annual receipts of \$4,999,999.00 or less, and an additional 103 firms had receipts of \$5 million to \$9,999,999.00.¹⁸ Thus, under this standard, the great majority of firms can be considered small.

Cable Antenna Relay Service (CARS) includes transmitters generally used to relay cable programming within cable television system distribution systems. The SBA has developed a small business size standard for Cable and other Program Distribution, which consists of all such companies having annual receipts of no more than \$12.5 million." According to Census Bureau data for 1997, there were 1,311 firms within the industry category Cable and Other Program Distribution, total, that operated for the entire year." Of this total, 1,180 firms had annual receipts of \$9,999,999.00 or less, and an additional 52 firms had receipts of \$10 million to \$24,999,999.00.²¹ Thus, under this standard, the majority of firms can be considered small.

Fired Microwave Services (FS) includes common carrier, private-operational fixed, and broadcast auxiliary radio services. Presently there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The SBA has developed a small business size standard for Cellular and other Wireless Telecommunications, which consists of all such companies having 1,500 or fewer employees.²² According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year.²³ Of this total, 965 firms had employment of 999 or fewer employees, and an additional

¹⁴ *Id.* at NAICS code 513112

¹⁵ U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Receipts Size of Firms Subject to Federal Income Tax: 1997," Table 4, NAICS code 513120 (issued Oct. 2000).

¹⁶ *Id.* The census data do not provide a more precise estimate.

¹⁷ *Id.* At NAICS code 513112

¹⁸ *Id.* The census data do not provide a more precise estimate

¹⁹ *Id.* at NAICS code 513220

²⁰ *Id.* at NAICS code 513220

²¹ *Id.* The census data do not provide a more precise estimate.

²² 13 CFR 121.201, NAICS code 513322

²³ U. S Census Bureau, 1997 Economic Census, Subject Series: Information, "Employment Size of Firms Subject to Federal Income Tax: 1997," Table 5, NAICS code 513310 (issued Oct. 2000).

12 had employment of 1,000 employees or more." Thus, under this standard, virtually all firms can be considered small.

(D) Description of Projected Reporting, Recordkeeping and Other Compliance Requirements for Small Entities.

Under the rules adopted in this *R&O*, there are changes to reporting, recordkeeping, and other compliance requirements. In many cases: these changes streamline the existing licensing process or provide additional flexibility to licensees and applicants. Many of the proposed changes are related to the use of the Universal Licensing System (ULS) by BAS applicants and licensees. Applicants for BAS stations must apply through the Wireless Telecommunications Bureau using the ULS, which was adopted by *Report and Order* in 1998. To comply with this system, our decisions in this *R&O* are consistent with the decisions reached in that *Report and Order*. Accordingly, we have eliminated requests made by letter if there is a standard application form that can be used instead, modified the rules defining major and minor changes to those used for fixed microwave systems, and eliminated the need to report transmitter output power and requiring that all stations comply with limits on effective isotropic radiated power. We also have changed the period of construction for a BAS station from the currently used three years to eighteen months, consistent with the period used for fixed microwave stations.

Additionally, we have conformed some of the rules that affect frequency bands that are shared among BAS licensees (Part 74), CARS licensees (Part 78), and fixed microwave licensees (Part 101). Specifically, we have updated the rules that protect interference to geostationary satellites from receiving harmful interference from fixed stations to those currently listed in the ITU International Radio Regulations. The effect of this update is to expand the number of frequency bands to which these rules apply. We also have adopted for BAS equipment, emission limitations that are consistent with those already being used for fixed microwave stations. We also are generally requiring that all BAS applicants for fixed stations operating above 944 MHz comply with the same frequency coordination guidelines in place for fixed microwave stations.

Further changes entail providing technical guidelines for TV studio-to-transmitter links and TV relay stations that operate on UHF-TV channels. These guidelines have always been imposed, but never codified. Also, with respect to BAS Remote Pickup stations, we are altering their channel plan to be consistent with the same channel spacing requirements as are used for Private Land Mobile Radio stations in Part 90 of our rules. Finally, as noted, we have allowed a new type of device to operate on certain VHF and UHF TV channels, wireless assist video devices. These devices will follow the existing service rules for Low Power Auxiliary Stations, with minor exceptions."

(E) Steps Taken to Minimize the Significant Economic Impact on Small Entities and Significant Alternatives Considered.

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance

²⁴ *id* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

²⁵ See *Report and Order*, paragraphs 153, 154 and 155, *supra*.

or reporting requirements under the rule for small entities: (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.”

We have reduced burdens wherever possible. Our rules regarding the **BAS** would reduce burdens on small entities. First, we have simplified and expanded the opportunity for aural and TV **BAS** licensees to use digital modulation techniques in all of their allocated frequency bands. Currently, they can use these techniques only in a few bands and must file waiver requests and requests for special temporary authority (**STA**) to transmit digital signals in other bands. Our rules eliminate the need for these waivers and STAs, thus saving businesses the time it takes to prepare these requests and their associated filing fees. Second, we have altered the equation used to determine the allowable EIRP for short path lengths. Under our new rules, there will no longer be a large drop-off in allowable EIRP when the path length of a fixed station is slightly shorter than the minimum necessary for maximum power. The effect of this is to provide more flexibility in the way small entities design their systems. Because they will be able to use fewer sites, this has the effect of a reduction in the cost of a system. Third, we have allowed automatic transmit power control (ATPC). ATPC benefits small entities by reducing outages to digital receivers and expanding battery life. Both of these effects benefit small businesses by making their systems more reliable.

Many of our rule amendments and their benefits stem from the use of the ULS for application filing. This system, by providing for electronic filing on standardized forms, benefits small entities in several ways. Applicants can submit applications to the Commission as soon as they have the necessary information on-hand, and they receive instant feedback as to the correctness of that application because ULS will not accept the application for filing unless it is correct. If there are errors, ULS provided error messages so that the application can be corrected and resubmitted. Also, the system makes extensive use of electronic processing, so that many of the tasks that were done by hand are now done by computer. The overall effect is that applications are processed faster and licenses are issued sooner, thus allowing small entities to begin providing service in a more timely manner.

We have also adopted rule amendments that conform rules for similar services that share spectrum. These are TV **BAS**, CARS, and the fixed microwave service. As a whole, these amendments reduce burdens to small entities because many of these entities have licenses in each of these rule parts, but must currently contend with different rules in each part. Thus, small entities will benefit because they will, in many instances, be able to comply with a common set of rules for their systems, which operate in any of the named services.

Additionally, we have adopted many other rule changes that will benefit small entities. We are requiring that fixed **BAS** systems prior coordinate their frequency use, which will ensure that systems operate in a manner that minimizes the potential of causing interference. This protects the *new* system from possibly being shut down due to causing interference and protects the existing system from suffering a service disruption from receiving interference. Both of these results will benefit small entities operating in the **BAS** service. Along with the frequency coordination requirement, we have extended the ability to operate under temporary conditional authority to all **BAS** frequency bands. This benefits small entities by allowing them to begin operating sooner. Further, we have extended the reach of the short-term *operation* rule to all entities eligible for a **BAS** license. This benefits small entities because many would not need to obtain additional licenses from the Commission to provide limited service a few times a year in areas in which they do not traditionally operate. Such a change saves small entities the time and money that they would otherwise expend obtaining a license. Another change entails the Commission

²⁶ 5 U.S.C. § 603(c).

establishing technical requirements for operating TV STLs or TV relay stations on UHF-TV channels. This change permits applicants to know the requirements they must meet before applying for a license, thereby reducing the number of applications that must be returned by the Commission. Thus, small entities will benefit by having to respond to returned applications less often. We have also altered the channel plan for Remote Pickup **BAS** to conform to the channel plan adopted for PLMR services. Unless the same technical criteria are used for both services, different radios must be developed. Thus, our rules change will benefit small entities by lowering equipment costs. Finally, we have permitted motion picture and television producers to operate new wireless assist video devices on certain unused VHF and UHF TV channels. This will benefit small entities by providing a more cost effective means for producers to monitor multiple camera angles when producing program material.

The regulatory burdens we have retained, such as filing applications on appropriate forms, are necessary to ensure that the public receives the benefits of new and existing services in a prompt and efficient manner. We also considered revising the burden of frequency coordination for fixed BAS systems, but found that this alternative would unnecessarily increase the potential of harmful interference. However, under our frequency coordination procedures, entities may self coordinate rather than paying a frequency coordinator. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing significant economic impact on small entities.

F) Report to Congress.

The Commission will send a copy of the Report and Order, including this **FRFA**, in a report to be sent to Congress pursuant to the Congressional Review Act.” In addition, the Commission will send a copy of the Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Report and Order and FRFA (or summaries thereof) will be also be published in the Federal Register.²⁸

²⁷ See 5 U.S.C. § 801(a)(1)(A).

²⁸ See 5 U.S.C. § 604(b).

APPENDIX C: COMMENTING PARTIESComments

Alliance of Motion Picture and Television Producers
Association for Maximum Service Television, Inc. and the National Association of Broadcasters
Association of America's Public Television Stations and the Public Broadcasting Service
Comsearch
Globalstar **USA**, Inc. and Globalstar. L.P.
Microwave Radio Communications, LLC
National Spectrum Managers Association
Society of Broadcast Engineers. Inc.
Winstar Communications, Inc.

Reply Comments

Alliance of Motion Picture and Television Producers
Comsearch
KNME-TV
Microwave Radio Communications. LLC
National Spectrum Managers Association
National Telecommunications and Information Administration
Red River Broadcast Co. LLC and KQDS Acquisition Corp.
Shure Incorporated
Society of Broadcast Engineers, Inc.
Telecommunications Industry Association
Viacom. Inc.

Ex Parte Presentations and **Filings**

Microwave Radio Communications, LLC
National Translator Association
Society of Broadcast Engineers, Inc.